# Technical Output of the ICWIM3 Conference

Mark P. Gardner Fugro-BRE Inc. Austin, Texas

# Analysis/Evaluation of WIM Systems

- Advancements in Fiber Optic Use
- Status Reports of Various Technologies
  - Bridge
  - Quartz Piezo
  - Impact of the Environment on Operations

#### Site Characterizations

- Smoothness
- Assessment/Evaluation of Site
  Acceptability for WIM Measurement
- Implications on Data Accuracy

#### WIM Standards

- Metrological Standards for Weighing
  - Very tight tolerances for trade and enforcement
- ASTM 1318 New and Improved
- General Recognition of the Need for International Standards

### Calibration and Accuracy

- Improved Tools and Tests
- Impacts of Harsh Environments

# Bridge WIM Systems

 Continued Advancements in the Technology Application

#### Enforcement

- Approaches for Use of WIM data for Enforcement – Screening
- Applications and Limitations
- Effective Use in Asia with Large Overloads
- Need to Educate Legal Entities in Applications and Capabilities

# Application to Structural Design

- Load Restrictions
- Load Spectra 2002 Design Guide
- Bridge Design The Eurocode, and links between loading measurements and design.

# Warranty Issues

Use of WIM for Project Warranties

# Freight Mobility

Trends in Heavy Vehicle Movement

#### To The Future.....

- High Speed Enforcement
- International Standards
- Acceptable Accuracy Tolerance for Warranty Applications
- Data Management Tools
- NTCIP Standards
- ISWIM